

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016310**Date Inspected:** 08-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspector: Mr. Liu Hua Jie

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Segment Trial Assembly

This QA Inspector observed ZPMC personnel appeared to be performing blast cleaning of the interior of OBG segments 9BE and 9CE. A heavy cloud of dust, dirt and other fine debris was emanating from various openings and the end of the East Bound OBG segments and the dusty cloud was carried in the wind toward portions of the Westbound OBG where ZPMC personnel were working.

This QA Inspector observed ZPMC welders Mr. Zhang Yan Jun, stencil 218714 and Mr. Lv Yongquan stencil 500409 were using shielded metal arc welding process to a weld temporary alignment plate to OGB segments 9DW and 10AW counterweight side of the bottom plates. This QA Inspector measured both welders to have welding currents of approximately 170 amps, the base material adjacent to this weld was preheated with a torch and both welders appeared to be certified to make these welds. Items observed on this date appeared to generally comply with applicable contract documents.

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This QA Inspector observed ZPMC welder Mr. Mao Zheng Zhong, stencil 500432 was using shielded metal arc welding process to tack weld a temporary alignment plate to OGB segments 9DW and 10AW cross beam side of the bottom plates. This QA Inspector measured a welding current of approximately 160 amps, the base material adjacent to this weld was preheated with a torch and Mr. Mao Zheng Zhong appeared to be certified to make these welds. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Cheng Chong Lang, stencil 251194 was using shielded metal arc procedure WPS-B-P-2113-B-U2-FCM-1 to make side plate "T" stiffener butt welds SP733-001-043 through -046. These welds are located on OBG segment 9DW between panel points PP82 and PP83. This QA Inspector observed the welding electrodes were being stored in a portable rod oven which is warm to the touch and it was connected to an electric power cable. This QA Inspector observed that Mr. Cheng Chong Lang used a torch to preheat the base material and he appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xu Nai Jun stencil 044551 used shielded metal arc welding procedure specification WPS-B-P-2214-FCM-1 to complete corner assembly weld EP127-001-010. This weld is located at OBG segment 9DW to 9EW on the cross beam side near panel point PP079. This QA Inspector observed a welding current of approximately 165 amps and the base material had been preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

ZPMC QC Inspector Mr. Wang Li Yang informed this QA Inspector that ZPMC welder Mr. Dai Lu, stencil 048659 had recently completed using the shielded metal arc welding process to perform weld repairs of visual rejections on various stiffener plates that are located inside OBG cross beam CB12. Mr. Wang Li Yang informed this QA Inspector that ZPMC QC does not record welding parameters for these types of weld repairs. This QA Inspector performed random visual inspections inside OBG cross beam CB12 and observed ZPMC is installing bolts at various connections and that no personnel appear to be welding inside cross beam CB12. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xu Zichuan, stencil 205098 was using shielded metal arc welding procedure WPS-B-P-2112-FCM-1 to complete tack welds of hold back welds for various stiffener plates on the cross beam side plates between OBG segments 9BW and 9CW. This QA Inspector observed a welding current of approximately 160 amps, the base material had been preheated with a torch and that Mr. Xu Zichuan appeared to be certified to perform this welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wu Wen Kai stencil 500433 was using shielded metal arc welding procedure WPS-B-P-2112-FCM-1 to complete tack welds of hold back welds for various stiffener plates on the cross beam side plates between OBG segments 9EW and 10AW. This QA Inspector observed a welding current of approximately 160 amps, the base material had been preheated with a torch and that Mr. Wu Wen Kai appeared to be certified to perform this welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Qiu Jun stencil 057333 used shielded metal arc welding procedure specification WPS-B-P-2214-TC-U4b-FCM-1 to complete weld SEG059*-040. This weld was located

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at OBG segment 9EW and 10AW corner assembly between panel points PP085 and PP86. This QA Inspector observed a welding current of approximately 170 amps, Mr. Zhang Qiu Jun appeared to be certified to make this weld and the base materials appeared to have been preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Cheng Chong Lang, stencil 251194 was using shielded metal arc procedure WPS-B-P-2112-FCM-1 to weld "T" stiffener plate hold back welds SP731-001-025 through -036. These welds are located at OBG 9CW near panel point PP079. This QA Inspector measured a welding current of approximately 150 amps, Mr. Cheng Chong Lang appeared to be certified to make this weld and the welding electrodes were being stored in a portable rod oven which is warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

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| Inspected By: | Dawson,Paul | Quality Assurance Inspector |
| Reviewed By: | Carreon,Albert | QA Reviewer |
